

CHALCIDS (PARASITIC HYMENOPTERA) FROM INDIA.

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Family TORYMIDAE.

Lioterphus orissaensis, sp. nov.

Female.—Length exclusive of ovipositor and antennae 3·5 mm. Ovipositor 4 mm. long. Body black to very dark green in colour, densely clothed with moderately long pubescence. Head metallic green, without a distinct sculpture and with an obliquely broad, hairless line touching the postero-lateral aspect of the inferior border of the eyes and extending narrowly upwards both in front and behind. Mandibles dark blood red in colour. Antennae dark brown; scape lighter coloured than the other segments; pedicel about one third the length of scape; ring joint minute; first segment of funicle somewhat broader than long, but very much shorter and narrower than the other segments of funicle; second segment longest; succeeding segments a little shorter than second; last segment of funicle somewhat shorter than the one immediately preceding; club large, short, triarticulate and about one-half the length of scape. Thorax greenish black. Femurs brownish violet. Hind coxae concolourous with thorax. Tibiae and tarsi brown. Abdomen black and about half the length of body. Submarginal and marginal veins brown; stigma black and sessile.

Type.—One female on pin (with one antenna and one hind leg on slides), No. 907/H 3. In the collections of the Zoological Survey of India, Indian Museum, Calcutta.

Type-locality.—Puri, Orissa; Mus. Coll., 20-21.i.1908.

This is the first record of a species of *Lioterphus* Thoms. from India.

Monodontomerus trichiophthalmus (Cameron).

1913. *Paroligosthenus trichiophthalmus*, Cameron, Ind. For. Rec., IV, p. 95.

1922. *Monodontomerus trichiophthalmus*, Waterston, Ind. For. Rec., IX, p. 52.

This species was first described by Cameron, who erected a new genus *Paroligosthenus* for it. I agree with Waterston in considering *Paroligosthenus*, a synonym of *Monodontomerus* Westw. and include Cameron's species under that genus.

Cameron recorded the species on *sal* (*Shorea robusta*) from Dehra Dun. Waterston recorded it as parasitic on a leaf-cutting bee from Dehra Dun. I have before me one female received from the Government Entomologist, Agricultural College, Lyallpur, bearing the label: "Coll. U. Bahadur, in laboratory 4-v-1923, 1423-5. 1B" In the Lyallpur specimen the ovipositor is much longer than in the type, being about two thirds the length of body. The pubescence on the head is neither so

long nor so dense as that on thorax ; that on the eyes is much shorter than elsewhere. The specimen further differs from the type in that the first segment of flagellum is not obscure green above.

Pachytomus mantisiphagus, sp. nov.

This is the first record of a species of *Pachytomus* Westw. outside Egypt, whence the genus was originally described.

Male.—Length 4 mm. General colour of head and thorax dark green. Abdomen brownish honey coloured, except towards the apex where it is reddish brown. Fore and mid legs honey brown. Hind coxa concolourous with thorax. Hind femur testaceous black, pubescent and with indications of oblique transverse striae ; first tooth small; second longer and sharper ; third somewhat longer, broader, bluntly pointed and with two minute carinae ; fourth tooth broad, short and blunt. Head with indications of very fine transverse striations behind. Eyes red. Mandibles coppery red. Pedicel of antennae one third the length of scape ; first funicular segment short, narrowed abruptly at the base, less than half the length of pedicel ; second funicular segment somewhat longer than the rest, which are subequal, except the apical two which are short. Club large, two thirds the length of scape and indistinctly triarticulate.

Type.—One male on pin with the antennae on slide, No. 908/H 3. In the collections of the Zoological Survey of India, Indian Museum, Calcutta.

Type-locality.—Barkuda Island, Chilka Lake. Coll. N. Annandale, 25.vii-4.viii.1917 ; “ Bred from eggs of mantid ”

Family CHALCIDIDAE.

Genus **Anacryptus** Kirby.

- 1862. *Epitranus*, (partim), Walker, *Trans. Entomol. Soc. London*, (3), I, p. 348.
- 1883. *Anacryptus*, Kirby, *Journ. Linn. Soc. London*, (Zool.), XVII, p. 56.
- 1904. *Anacryptus*, Ashmead, *Mem. Carnegie Mus.*, I, (4), p. 254.
- 1909. *Anacryptus*, Schmiedeknecht, *Gen. Ins.*, fas. 97, p. 48.

In 1883, Kirby transferred Walker's species *impulsator* from the genus *Epitranus* to his new genus *Anacryptus*. Since then six more species of the genus have been described ; *ferrugineus* from Australia by Girault¹, *insidiosus* from Seychelles, *rufinus*, *kankauensis* and *anpingius* from Formosa by Masi² ; and *sudanensis* from Sudan by Ruschka³. No member of the genus has so far been recorded from India.

The genus is easily distinguished from the closely allied genera *Neoanacryptus* Gir. and *Paranacryptus* Gir. by its 13-jointed antennae (though it appears probable that the antenna is not really 13-jointed, the club being solid, with a reddish transverse band but no suture),

¹ Girault, *Mem. Queensland Mus.*, IV, p. 349, (1915).

² Masi, *Nov. Zool.*, XXIV, p. 123, (1917) ; *Konowia*, XII, pp. 11-15, (1933).

³ Ruschka, in Alfken *Denks. Akad. Wiss. Wien*, XCIX, p. 99, (1924).

basal tooth followed by fine serrations on hind femur and the basal outer tooth of hind tibia.

Anacryptus chilkaensis, sp. nov.

This species differs from all the other species of the genus described so far in having the antennae only 12-jointed (club solid and not bi-articulate as it would appear), the general black colour of body and in the 14 uniform serrations following the large basal tooth on hind femur.

Male.—Length 4.5 mm. General colour of body black. Head black, as broad as thorax; antennal fovea transversely striate; without a distinct sculpture above and behind; sides flat, longitudinally striate, strongly carinate behind and above, where the carina touches the eyes postero-laterally; there is also a slight carina below the eye running obliquely fronto-lateral. Eyes dark reddish brown. Antennae a little less than half the length of body, segments 12 inclusive of one ring joint; scape half the length of antenna, with a slight lateral expansion especially towards the apex; pedicel somewhat longer than the first segment of funicle; ring joint minute, very much wider than long but not as wide as the funicle; first segment of funicle shorter than all the rest and less than half the second, somewhat stouter apically than basally; second segment longest of all funicular segments, of almost uniform thickness throughout; rest of the segments of the funicle subequal, the third being somewhat stouter apically than basally and the last two subquadrate; club almost twice the length of the last funicular segment, reduced towards the apex, with a reddish transverse band in the middle but without a real suture, i.e., the club is solid and not biarticulate as it would appear to be. Thorax black, closely sculptured with large rugose punctation; the large punctae being themselves minutely punctulate; sparsely setose; metathorax without a distinct sculpture. Wings hyaline. All legs dark reddish brown. Hind coxa moderately setose, transversely striate; hind femur somewhat darker than the rest of the hind leg, moderately setose, faintly longitudinally striate, with fourteen small, black, blunt teeth, behind a large basal tooth, first somewhat smaller than the rest. Petiole of abdomen as long as the hind coxa, black except at the apex, where it is brownish; distinctly longitudinally corrugated. Abdomen very dark ferruginous, smooth and with sparse long hairs.

Type.—One male on pin, with its antenna on slide, No. 909/H 3. In the collections of the Zoological Survey of India, Indian Museum, Calcutta.

Type-locality.—Barkuda Island, Chilka Lake. Coll. N. Annandale, 4-ix-1920. “Hymenopteron with predaceous ants (*Camponotus compressus*) and myrmecophilous crickets from nest in box of books in bungalow”

Paranacryptus sanguineus Girault.

1915. *Paranacryptus sanguineus*, Girault, *Mem. Queensland Mus.*, IV, p. 349.

This species was described by Girault from a specimen, which he records as the female. He describes the first segment of the funicle

as the longest of all the funicular segments in the female. I have before me two males and one female, from Port Blair, Andamans, which agree with Girault's description in every respect, except in that the first funicular segment is not the longest in the female but only in the male. It seems likely that Girault's specimen was really a male. The Andaman specimens are also slightly larger than those described by Girault. I add the following notes as a supplement to Girault's description of the species.

Female.—Length 5 mm. General colour of body mostly dark blood red, more or less blurred with black. Head honey brown, umbilically punctate and sparsely setose; middle of face without the umbilicate punctuation, at the most with a few minute punctulae; viewed in front triangular, with a height six seventh the greatest breadth. Antennae dark reddish brown; scape slender; pedicel about one sixth the scape; ring joint large, much wider than long; third (first funicular) segment about half the length of the other funicular segments, somewhat broader than long; fourth to seventh segments subequal, with their lengths equal to their breadths; eighth and ninth segments each equal to the seventh but somewhat broader; club about half the length of scape, solid, black at the tip, with a dark red stripe across it.

Two males and one female on pins, with the antennae of one male and female on slides. Coll. S. W. Kemp, 15.ii-15.iii.1915, Port Blair, Andamans.

Genus **Arretoceroides** Girault.

1915. *Arretoceroides*, Girault, Proc. Queensland Ent. Soc., XXIX, pp. 241-242.
1915. *Arretoceroides*, Girault, Mem. Queensland Mus., IV, p. 351.

Apparently only one species of this genus, the Australian *A. feralis* Gir., has been described so far. I give below the description of a new species from Ceylon under the name *A. ceylonensis*, sp. nov.

Arretoceroides ceylonensis, sp. nov.

This species is somewhat smaller than *A. feralis* Gir., from which it is further distinguished by the short (broader than long) first segment of the funicle and hyaline wings.

Male.—Length 4 mm. General colour of body black. Head somewhat broader than thorax, black, without any distinct sculpture, rather densely and finely pubescent. Antennae about as long as thorax, dark reddish brown; scape slender, about half the length of antenna; pedicel short; one minute ring joint, broader than long but not as wide as the funicle; first segment of the funicle very short, much broader than long; second to eighth segments subequal; second and third segments longer than broad, rest subquadrate; club a little longer than scape, there is a transverse dark reddish band running near its basal fourth but there is no suture in this region; other funicular segments, except the first also bear similar lines. Pronotum, mesonotum and scutellum black, umbilically punctate, densely setose; punctuation on metapleura somewhat larger than in the other regions. Hind coxa

black, sparsely and indistinctly punctate, rather very densely setose beneath; other coxae reddish brown. Rest of the legs reddish brown except the hind femur, which is somewhat darker. It is also densely punctulate and finely pubsecent, with one large basal tooth followed by ten blunt, black, smaller ones; last three teeth minute. Wings hyaline. Abdomen oval, reddish brown, blurred by black above, very finely and sparsely punctulate. Petiole of abdomen about three fourths the length of hind coxae, moderately thick and longitudinally corrugated.

Type.—One male on pin with one antenna on a slide, No. 911/H 3. In the collection of the Zoological Survey of India, Indian Museum, Calcutta.

Type-locality.—Peradeniya, Ceylon. Mus. Coll. 14-vii-1910.